EBA European Blood Alliance

NHS Blood and Transplant

Changing the Culture as part of consolidation

Nick Tandy , EBA Flying Squad

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Lean…working smarter not harder

Value

Value Stream

Flow

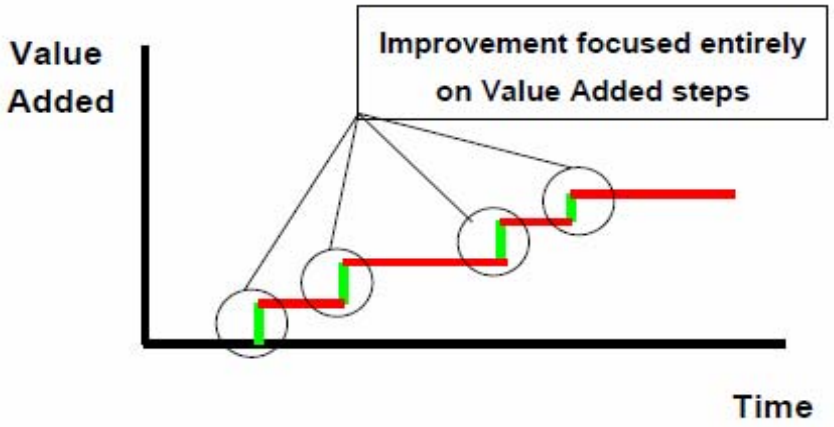
Pull

Perfection

The Traditional Approach

Traditional

- Focus on bits of the process
- Slow
- Difficult
- Often required investment
- Incremental results

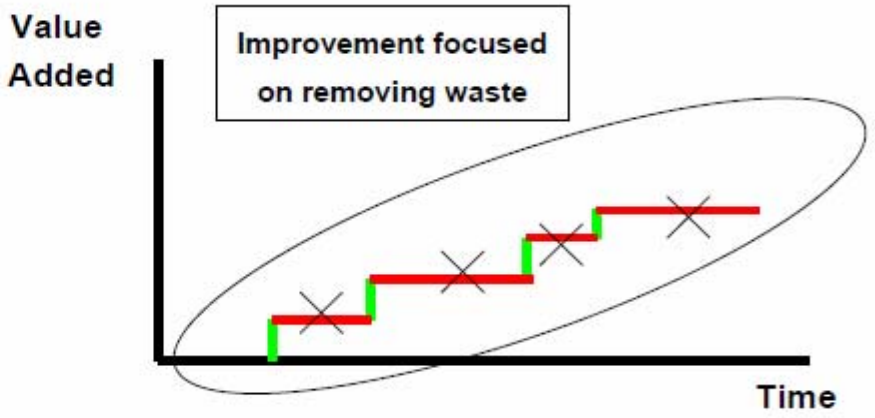


Focus on the 10% that is value added

The Lean Approach

Lean

- Considers the whole process
- Faster
- Easier
- Often lower cost
- Break through results



90 % of process steps (some necessary) are ‘non-valued added steps

Non-Value-Added ……. Waste

- Non-value added activities are categorised in the form of the '8 Wastes':
  - **T**ransport
  - **I**nventory
  - **M**otion
  - (**P**)eople
  - **W**aiting
  - **O**ver production
  - **O**ver processing
  - **D**efects

Focus on removal of non-value added tasks to improve capacity

Operational Improvement Approach

- Value Stream Analysis (VSA)
  - Supply chain ;‘end to end’ process/steps that delivers value to the customer
- Process & Planning Event (2P)
  - developing the detailed plan
- Rapid Improvement Event (RIE)
  - A series of ‘doing’ events
  - Important to have all key players there!
    - Q,HR,H&S,Fac.

A3 thinking on a single page

T… Facilitators:

…sei:

1 2 3 4 5 6 7 8 9 V1.0

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1. Reason for Action

Go / No Go

Therefore the required improvement themes are:

2. Initial State

Where are we now? – Associate a measure to each of the aims in box 1.

Go / No Go

a HR

b Q

c Prod

Time

Initial State

Reflections: *what did you learn from this and what are you going to do as result? AND SO WHAT?*

3. Target State

for each of the measures in box 2

For RIEs, set objectives for each of the measures for what is achievable in 90 days. These will be re-measured at 30, 60 90 day follow up, in box 8. In 90 days, any improvements made should influence these measures so that box 3 = box 8

Go / No Go

a HR

b Q

c Prod

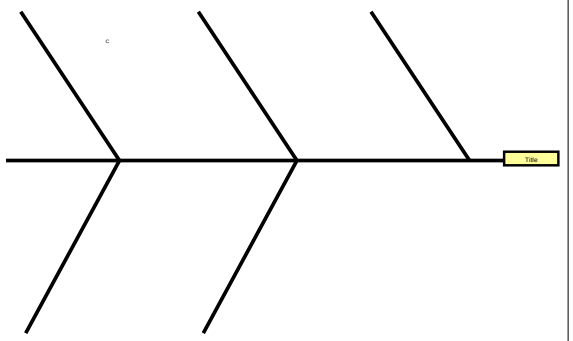
Time

Target State

Reflections: *what did you learn from this and what are you going to do as result? AND SO WHAT?*

4. Gap Analysis

Go / No Go



Reflections: *what did you learn from this and what are you going to do as result? AND SO WHAT?*

5. Solution Approach

Go / No Go

Cause	Solution Idea	Effecting Themes	Ease	Impact	Cost
1			X	Δ	0
2					
3					
4					

Solutions

Key 0 Easy/High/Cheap Δ Medium X Hard/low/expensive

Reflections: what did you learn and what are you going to do as a result – AND SO WHAT?

6. Rapid Experiments

Go / No Go

Experiment	Anticipated Effect	Actual Effect	Follow up Action

Reflections: *what did you learn from this and what are you going to do as result? AND SO WHAT?*

7. Completion Plan

Go / No Go

Solution	Action	Who	When	R/G
	Storyboard complete	T/L	Friday of RIE week	
	Connect Brief completed	T/L	Friday of RIE Week	
	OIP Poster complete	T/L	Friday of RIE Week	
	Update Attendance Sheet	Facilitator	Friday of RIE Week	
	check if required/ perform Risk assessments GMP and H&S	T/L		

8. Confirmed State

Monitor and track results against the measures defined in initial state. To be updated 30, 60 , 90 days and A3 on mission control refreshed.

Go / No Go

a HR

b Quality Q

c Cost or Productiv…

The table bel… highlight if the… 8 is red or gree…

Prod

Time

Confirmed State

Reflections: *what did you learn from this and what are you going to do as result? AND SO WHAT?*

9. Insights

Go / No Go

Potential Benefits	What went well?	What did not go well?
	Issues	Actions

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What is a Rapid Improvement Event ?

RIE (*Kaizen event*)

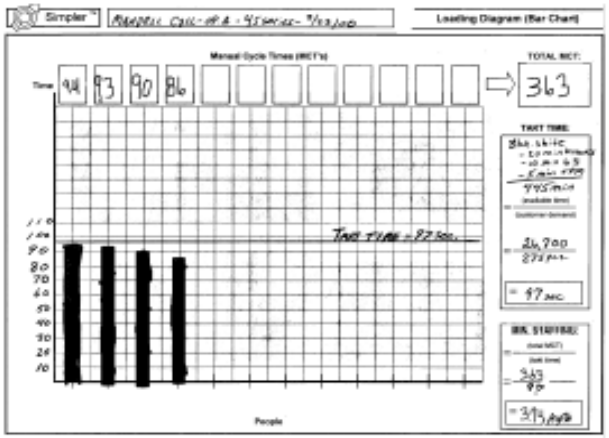
Rapid Improvement Events are the Vehicle of Change

- A way of delivering rapid change in one week
- An opportunity for the Team to make change happen

Standard Work

The Standard Work steps are:

- Time observation to understand the 'cycle time'
- Calculate the takt time
- Calculate the correct number of staff
- Balance the work between the staff
- Document the sequence of work
- Document the process layout and flow
- Create 'key points sheets'

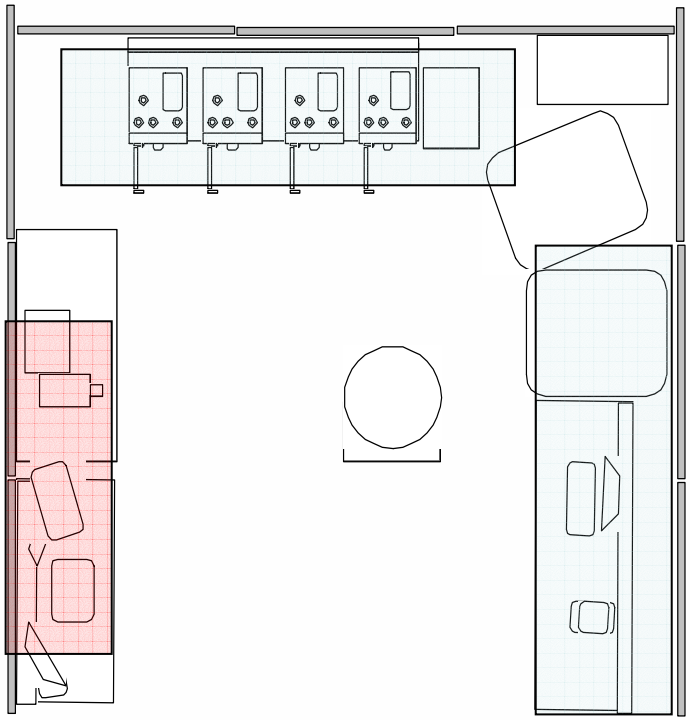


Tool example shown is the bar chart; used for work balance.

First Follow the standard work *then* find a better way

We revisited the pod design and standard work

Removal of waste allowed 2 people to run a Pod



33% improvement in Pod Productivity

Operator 1 – PCS74, Load centrifuge, Press

Operator 2 – SO7 & Cut down

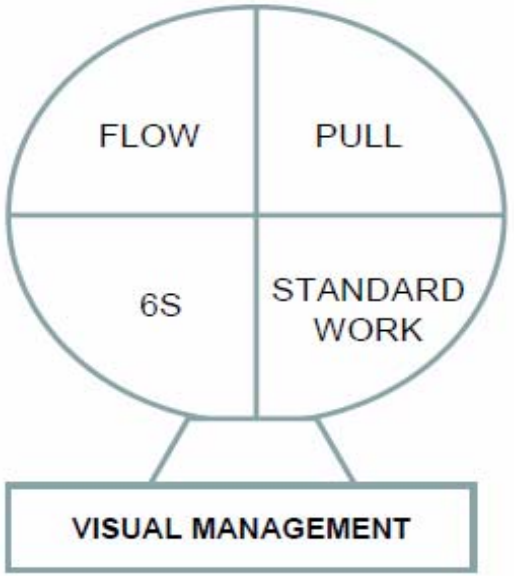
Visual Management

- Develop processes that can be visually managed.
- Management has value added & non value added steps
- Visual management eliminates lots of non-value added steps
- Leaders can devote more time to improvement
- Visuals make it easier to do right

Lean aspires to the 5 second rule

The Lean Cell

- 1 by 1 Flow
- On Demand
- Lowest Cost
- Visually Managed



Where people and process come together to create flow

Human Dimension of Improvement

BEHAVIOUR CHANGE

BELIEFS

VALUES

HABITS

ACTIONS

DECADES

YEARS

MONTHS

WEEKS

CULTURE is the sum of our collective behaviors

Knowledge Transfer

Simpler Healthcare™ Certification

	Green	Bronze	Silver	Gold	Platinum
	4 Hours	3 Days	2 Weeks	2 Weeks	3 Days
Prerequisites	None	Green Certification Advanced reading	Bronze Certification Advanced reading	Silver Certification Advanced reading	Gold Certification
Knowledge	Case for change A3 thinking Structure of event Flow game Lean principles	Effective team management Transformation process A3 thinking RIE prep, event & sustainment Problem solving and CA Attributes of a level 1 cell Personal development	VSA methodology VSA scoping 6S & visual management One need flow & pull systems Standard work Mission Control Managing the CI Process	Policy deployment 2P / 3P Product/service development Project management Leadership Steering committee	Mentorships Partnerships TPOC/mission sponsorship Facilitation/ coaching
Skills	Current state mapping Ideal state mapping Future state mapping	Understand each role How to use A3 thinking to solve problems Understand your role in team participation & event management	How to select key areas for targeted improvement How to use basic tools to see and eliminate waste How to lead others in the application of the methods	How to link improvement to strategy How to use advanced tools when and where appropriate Understand how to develop the infrastructure	How to apply transformational thinking How to apply the technique for each respective tool The ability to mentor rapid redesign at all levels
Behaviours	Can describe A3 thinking Understanding the importance of team rules	Using A3 thinking to solve problems Seeing elements of waste	Working effectively in a team Identifying process problems before people problems	Leading improvement in a systematic way Working with complexity (people, process & tools)	Belief that the tools apply everywhere Confidence to teach others at any level
Post Training Activity	Green Training Certificate Aide mémoire	Bronze Training Certificate Participate in two RIEs**	Silver Training Certificate Participate in one VSA Activity** Participate in five RIEs** Lead one RIE**	Gold Training Certificate 2nd Sensei on one VSA** Lead five RIEs**	Platinum Training Certificate Lead 25+ RIEs** Developed 3 mission A3s

Process · Capability · Culture · Results

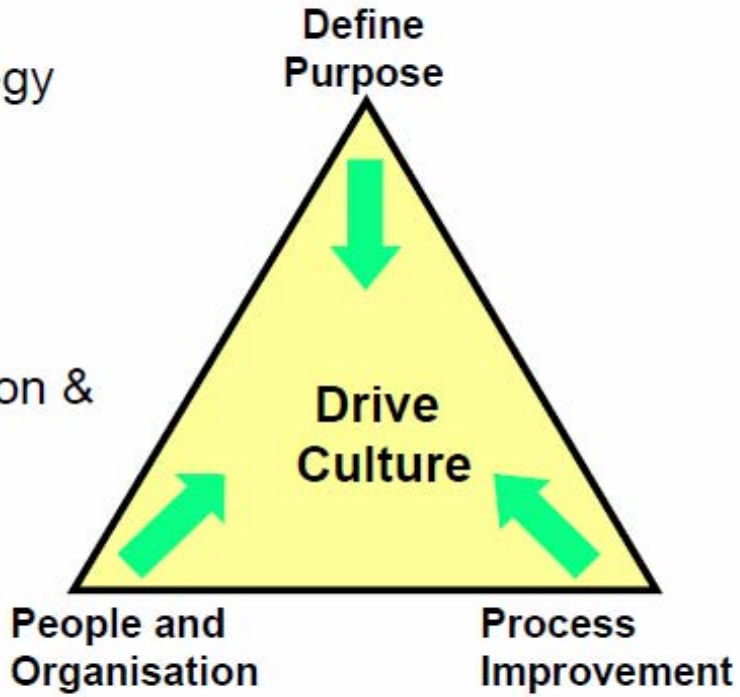
** Must demonstrate proper preparation, execution and sustainment using A3 methodology

Expert

Self Sustainment

Role of the Leaders

- Define Purpose
  - Set out clear purpose/vision & strategy
  - Define value at highest level
- Drive process improvement
  - Clear future state
  - Champion flow, pull, waste elimination & zero defects
  - Support RIE's
- Align the people & organisation
  - Organised by value stream
  - Trained and educated



Lean cannot succeed without leadership

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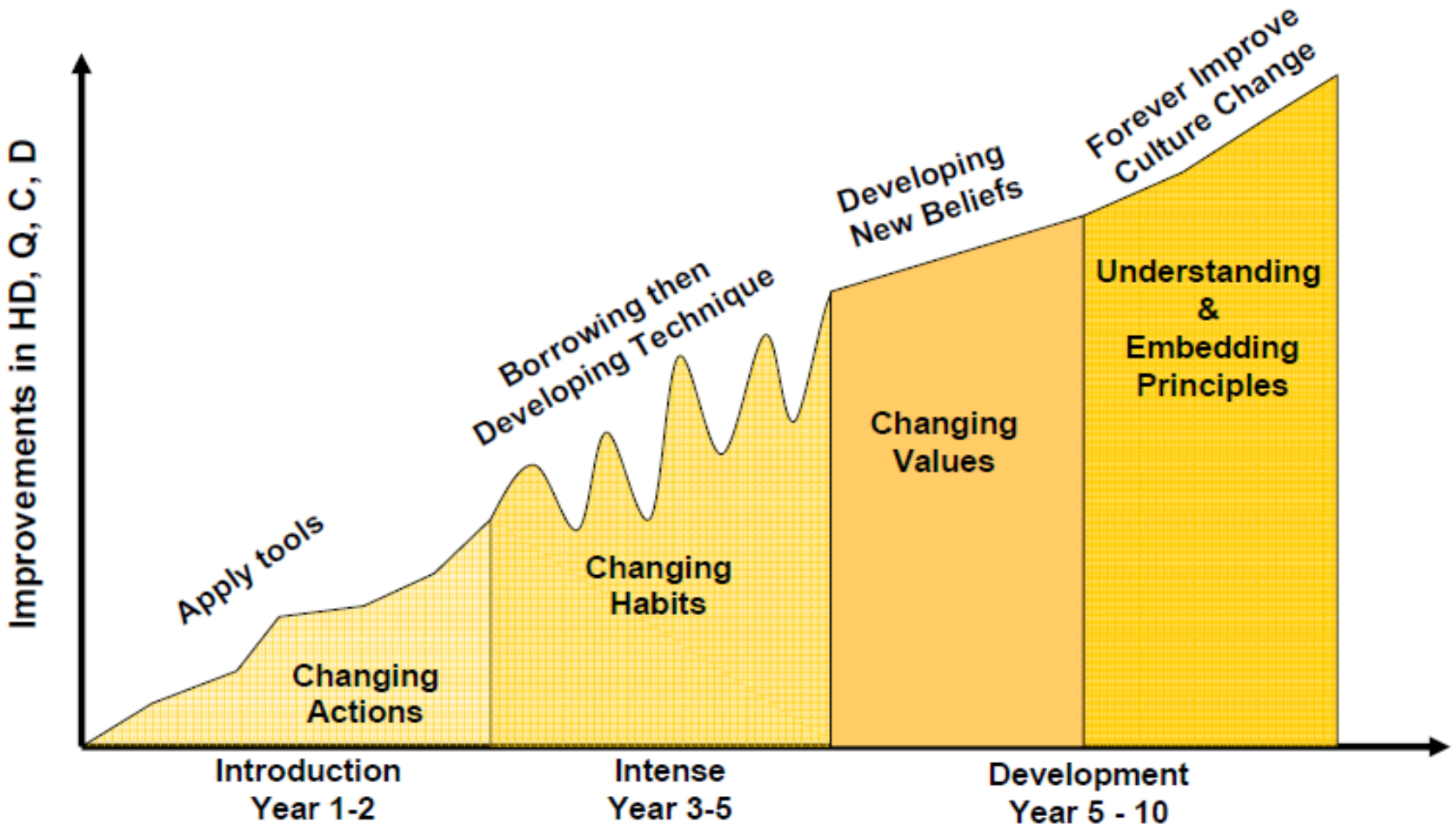
Phases of a Transformation



N/10 pace and 1–3% dedicated to Continuous Improvement

Does Manufacturing size matter?
Are there efficiencies of scale?

NHSBT evolution

Modernisation Programme:

Blood price: £140 → £123.

2007	**2013**
11 Processing sites	5 Manufacturing sites
10 Testing sites	2 Testing sites

- **General common points seen on visits**
  - *Lean thinking is at an early stage (ideas)*
  - *Few skilled Lean practitioners; No formal training in Lean*
  - *High numbers of scientifically (graduate) trained staff*
  - *Lack of targets, or scheduling information for a typical days activity*
  - *Lack of Supply chain coordination between*
    - *Manufacturing/Collection/ Testing/ Logistics (What is done is mainly at 'Top Table')*

- **General Points specifically in Processing:-**
  - *Visual Management information (little or none)*
    - No daily target/performance information displayed
  - *No evidence of Standard work measurement*
    - Part of Rapid Improvement Exercise
  - *Over processing*
    - Multiple mixing steps from arrival through to final components
  - *Over complexity*
    - Variable blood collection volumes, necessitates weighing/balancing
    - IT checks to interrogate for ‘exceptions’
  - *Batching, Waiting*
    - Components ‘pile up’ at certain pinchpoints , sit waiting in the work area
    - Lack of Flow
  - *Excess movement of people and product*
    - Need to re-align mechanics to balance/flow the process (Pod thinking)
  - *Productivity highly variable (Not measured hour by hour)*
    - Driven by ‘end of shift’ time, meal breaks,etc

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What has changed since the Flying Squad visit?

Have we stepped into ‘limelight’ from behind closed doors?

Whole Blood reception area: before EBA venue

After Flying Squad Venue: Creating a Lean and Productive Processing Facility

Processing PODs under development

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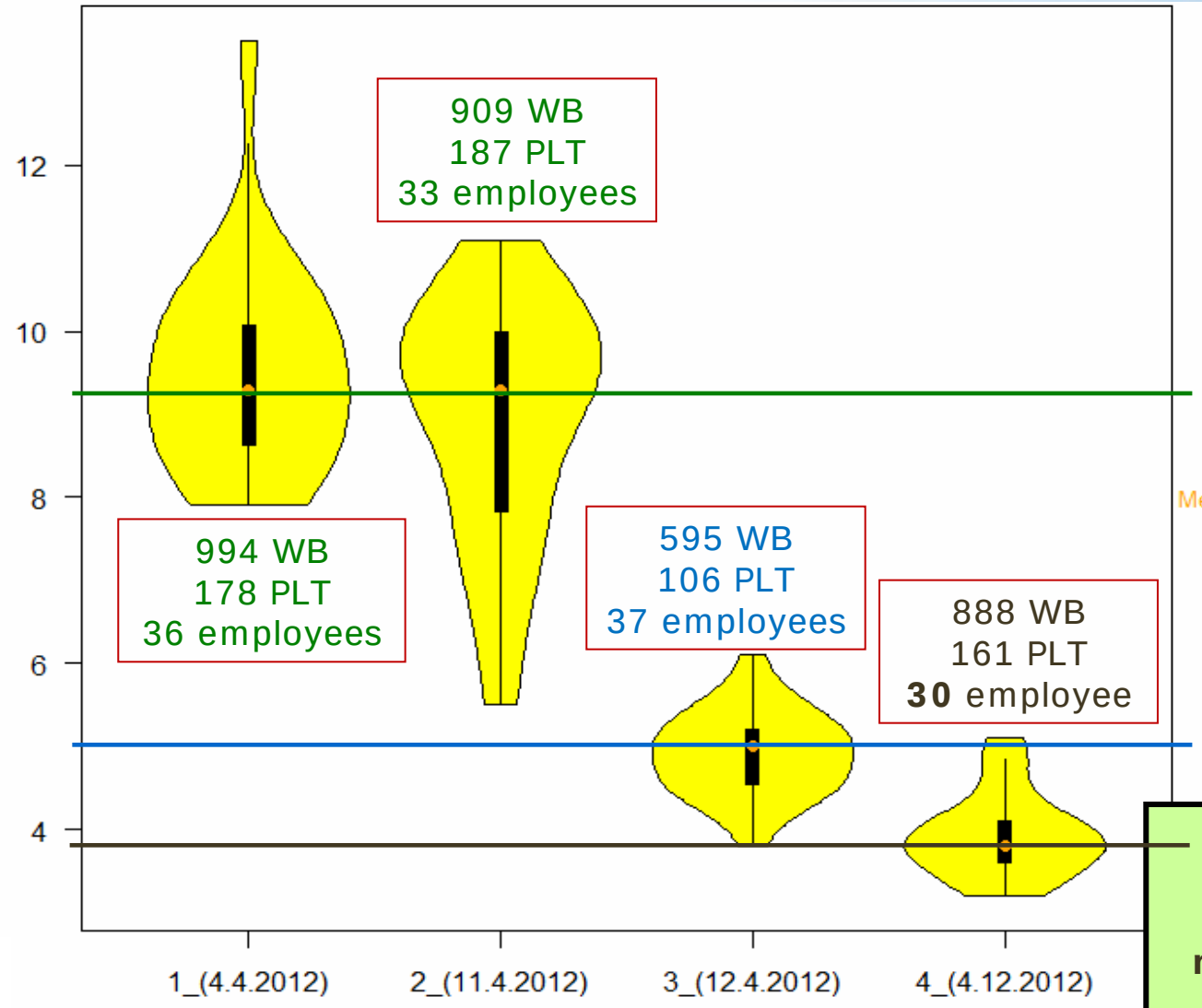
What has changed since the Flying Squad Visit?

Are we ‘hot or cold’ on Lean?

Pod configuration & workflows

- Pod configuration: 3 centrifuges, 6 component extractors, 3 employees
- Workflows, pods used both whole blood and platelets(bc) processing:
  - Whole blood: separation IT registration, mixing, packing into adapter cup, centrifuging, pressing
  - bc-pooling at an another pod
  - Platelets: mixing of bc-pool, packing into adapter cup, centrifuging, pressing

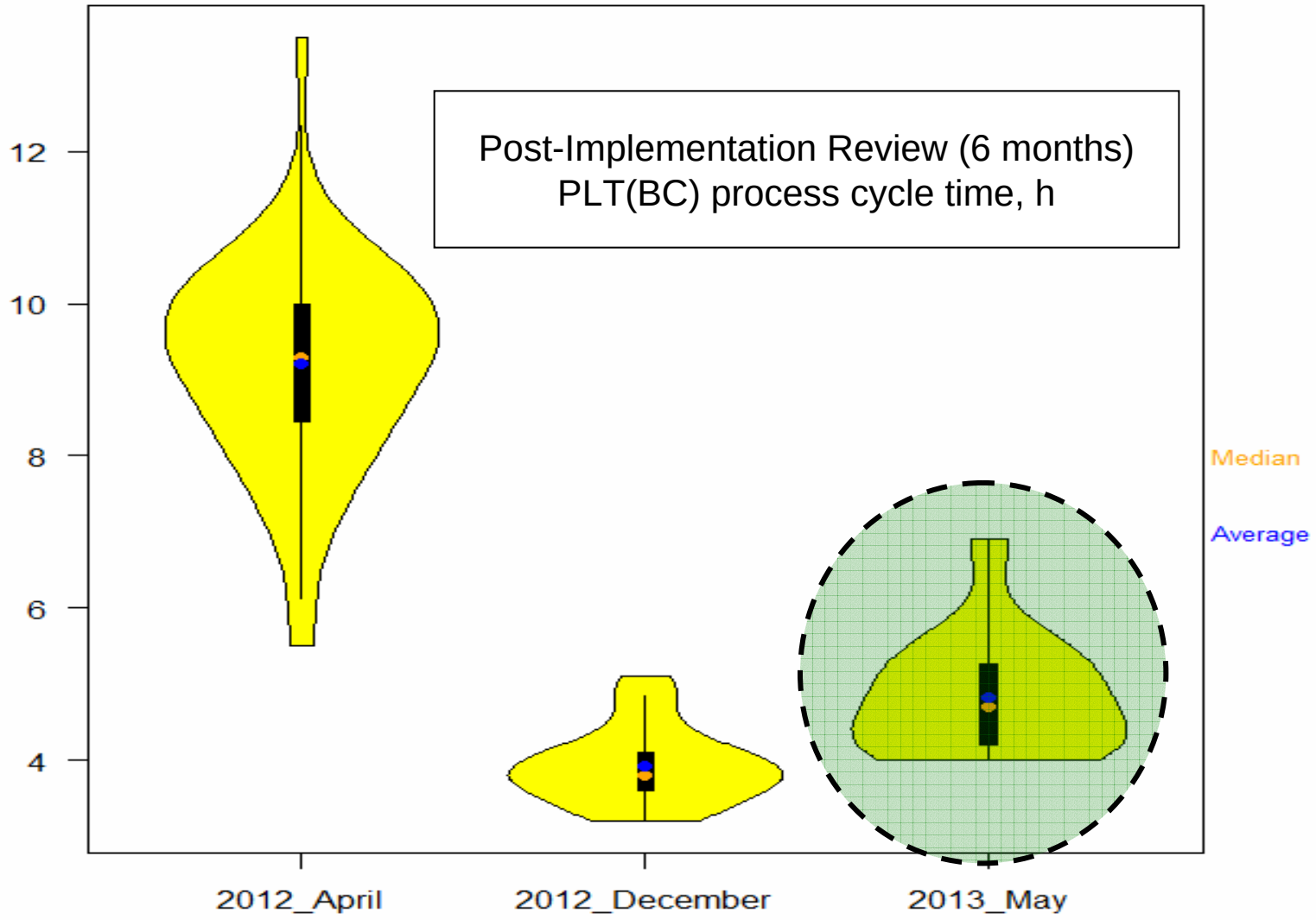
PLT(BC) process cycle time before and with pods, h



Before pods:
9 h cycle time for platelet process (if ~900 WB units in process)

Before pods:
5 h cycle time for platelet process (if ~600 WB units in process)

With pods:
4 h cycle time for platelet process (no matter how many WB units in process)


Post-Implementation Review (6 months)
PLT(BC) process cycle time, h
12
10
8
6
4
Median
Average
2012_April
2012_December
2013_May
No pods
Implementation
6 months after

In Summary

- ***More integrated approach to the Supply chain mgt.***
- ***Value Stream mapping of Supply chain – remove waste and utilise RIE approach to engage staff***
- ***Educate staff in Lean as part of individual development***
- ***Consolidation although helps improve efficiencies of scale, still requires a change a culture***
- ***Pod or Cellular design, helps operators to target and measure (hourly) activity, based on Standard Work.***
- ***Further collaboration through benching is a key aspect of sharing and skills transfer of Lean approaches.***
- ***Top Level investment is essential in formalising a Transformational Plan of Care (TPOC) which needs ongoing sustainment.***
- ***… or if you prefer to find the 'answer' in an absorbing book***